

IS 301 - Introduction to Web Technologies

Syllabus subject to change

Fall 2009

Instructor:

Ben Birch

E-mail: wbirch@utk.edu

Office Hours:

Tuesday and Thursday 2:00 pm to 3:00 pm

COM 101

Meeting Time and Location:

Tuesday and Thursday 3:40 pm to 4:55 pm

COM 309

Course Catalog Description:

Introduction to the Internet and World Wide Web technologies and practices. Topics include the history and development of the World Wide Web and the Internet; standards-compliant markup and tools for creation of markup (e.g., XHTML and style sheets); introductory Web page and Web site design.

Objectives: This course introduces the major components of the World Wide Web and the ways they work together to provide information and services, support creative work, and support social and political communities.

The course emphasizes markup, primarily use of Extensible HyperText Markup Language (XHTML) with Cascading Style Sheets (CSS), but in addition explains the roles of Web browsers and Web servers in delivering Web content. The course also introduces tools for creating, testing, and validating XHTML and CSS markup. Issues related to providing Web systems capable of serving users who may have varying personal capabilities (accessibility) are introduced. Finally, the course provides an introduction to the history and evolution of the Internet and the World Wide Web.

At the end of the semester, based upon your completion of the class readings, assignments, and lectures, you will be able to:

1. create, identify, and critique standards-compliant markup that also supports accessibility, usability, and maintainability
2. demonstrate fluency with the tools required to create, validate, and test markup, including Web browsers, text editors, Web servers, validators, and file transfer facilities
3. demonstrate the ability to design and code standards-compliant Web pages and assemble those pages into well organized, small-scale Web sites

4. demonstrate an understanding of the historical basis of the WWW, its evolution, the technologies that support it, and its social impacts

Required Materials

Textbook

Chapman, N. & Chapman, J. (2006). Web design: A complete introduction. Hoboken, NJ John Wiley & Sons. 692 pages. ISBN-13: 978-0-470-06089-6; ISBN-10: 0-470-06089-1.

Purchase this book online or at a local bookstore, including the UT bookstore located in the University Center. [Publisher's book site](#). [Authors' book site](#).

Blackboard

The syllabus and other course-related information will be available on the Blackboard system Online@UT at <http://online.utk.edu/>. This system provides support for asynchronous communications for the course. You will need your NetID and password to access the materials at Online@UT.

Recommended Materials

Books

Briggs, O., Champeon, S., Costello, E., & Patterson, M. (2004). Cascading style sheets: Separating content from presentation. 2d ed. Berkeley, CA: Friends of ED. 400 pages. ISBN-13: 978-1-59059-231-1; ISBN-10: 1-59059-231-X. [Publisher's book site](#).

Budd, A., Moll, C., & Collison, S. (2006). CSS mastery: Advanced web standards solutions. Berkeley, CA: Friends of ED. 280 pages. ISBN-13: 978-1-59059-614-2; ISBN-10: 1-59059-614-5. [Publisher's book site](#).

Morville, P. (2005). Ambient findability: What we find changes who we become. Sebastapol, CA: O'Reilly Media. 204 pages. [Publisher's book site](#).

Grades

Assignments	20%
Midterm	25%
Final exam	25%
Term project	25%
Class participation	5%
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TOTAL	100%

Assignments 20%

The assignments and project you complete in this course will be, for the most part, paperless. You will create a set of course-related Web pages as you work on the short assignments and term project. Note that this means that your pages will be accessible to the world as well as your classmates.

In general, these assignments deal with practical skills and practical aspects of markup as specific issues are introduced throughout the course.

Your term project will be presented as a set of well-coded, validated, hyperlinked XHTML pages.

There will be a total of four assignments. Assignments will be posted in blackboard. Each assignment is worth 5%

Midterm 25% and final exam 25%

Both the midterm and final exams will be take-home exams. You will have a week to complete each exam.

Midterm will be due on October 13, 2009
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Final exam will be due on December 8, 2009

Term Project 25%

Students will be divided into five groups. Each group will develop a web design for a specific institution, association, school or group. Each group in the course will present the results of their term project as a set of well-coded, well-designed, validated, hyperlinked XHTML pages.

The grading for the term project – 25% of your final grade – will break down according to the following:

- 5% for your project presentation
- 20% for the content (including the quality of your XHTML, CSS, and other coding)

Groups must be formed by 9/17

11/24: Term project due

Policy on late submission of assignments and projects: Five points will be deducted from your grade for each 24 hour period your submission is late. Please contact me prior to any assignment or project due date (as far in advance as possible) in order to negotiate adjustments due to an emergency.

Class participation 5%

Your presence and participation are vital to the success of this class, therefore attendance is mandatory. Roll will be taken at the beginning of every class. If an absence is unavoidable, please e-mail me before the absence, if at all possible. You may miss up to two class meetings without penalty, unless it is an exam day or a presentation day. Additional absences will incur a penalty unless acceptable documentation is provided (e.g., doctor's note). Class participation includes contributing during class discussions — sharing your thoughts and experiences about Web technologies, markup, etc. — and monitoring and posting to the asynchronous discussion boards (located on Blackboard) each week. The quality of your contributions is more important the quantity of contributions.

Read the assigned materials prior to the class for which they are assigned, and be prepared to refer to passages or issues of interest to you during our discussions.

If you have questions about the class, look at the discussion board. Please post your questions first to the class bulletin boards located on the Blackboard system at <http://blackboard.utk.edu/webapps/login/> unless the question is of a confidential nature (e.g., grades).

Grading System

Grade	Performance Level	Score (%)	Quality Points
A	Superior	92-100	4.0
A-	Intermediate Grade	88-91	3.7
B+	Very Good	85-87	3.3
B	Good	82-84	3.0
B-	Intermediate Grade	78-81	2.7
C+	Fair	75-77	2.3
C	Satisfactory	72-74	2.0
C-	Unsatisfactory	68-71	1.7
D+	Unsatisfactory	66-67	1.3
D	Unsatisfactory	62-65	1.0
D-	Unsatisfactory	60-61	0.7
F	Failure	0-59	0.0

Academic Integrity

University of Tennessee Policy: "Study, preparation, and presentation should involve at all times the student's own work, unless it has been clearly specified that work is to be a team effort. Academic honesty requires that the student present his or her own work in all academic projects, including tests, papers, homework, and class presentation. When incorporating the work of other scholars and writers into a project, the student must accurately cite the source of that work. (See Academic Standards of Conduct, pg. 11)." (Hilltopics: Student Handbook, 2008-2009, p. 40. Available at http://dos.utk.edu/files/hilltopics_08-09.pdf).

"The University expects that all academic work will provide an honest reflection of the knowledge and abilities of both students and faculty. Cheating, plagiarism, fabrication of data, providing unauthorized help, and other acts of academic dishonesty are abhorrent to the purposes for which the University exists. In support of its commitment to academic integrity, the University has adopted an Honor Statement (see page 11)." (Hilltopics: Student Handbook, 2008-2009, p. 41. Available at http://dos.utk.edu/files/hilltopics_08-09.pdf).

Accommodations

Students with Disabilities

If you need course adaptations or accommodations because of the impact of a disability or you have emergency information to share, please contact the Office of Disability Services. The ODS coordinates reasonable accommodations for students with documented disabilities. For more information, see <http://ods.utk.edu/>. Contact information for ODS:

2227 Dunford Hall
Knoxville, TN 37996-4020
(865) 974-6087 (v/tty)
Email: ods@utk.edu

Communications Policy

Please post your questions first to the class bulletin boards located on the Blackboard system at <http://online.utk.edu/>. Sharing your questions is helpful because (1) other people may have the same or similar questions and (2) you may get a faster or better response from other people in the class.

I will try to respond to your email questions within 48 hours.

Instructor:
Ben Birch
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University of Tennessee
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Knoxville, TN 37996-0341

Schedule

Week 1: 8/20 – Welcome & Course Introduction

Readings to complete

- Thursday
 - Syllabus

Week 2: 8/25 & 8/27 – Web Experiences and Web Technology

Readings to complete before class

- Tuesday
 - Chapter 1: Web Experiences from Web Design
- Thursday
 - Chapter 2: Web Technology (pp. 36-70, Web Pages, and Fetching Pages) from Web Design

Week 3: 9/1 & 9/3 – Web Technology & Markup

Readings to complete before class

- Tuesday
 - Chapter 2: Web Technology (pp. 70-96, Data Representations, Transmissions of Digital Data, and Key Points) from Web Design
- Thursday
 - Chapter 3: Markup (pp. 99-109, XML) from Web Design

Week 4: 9/8 & 9/10 – Markup, Continued

Readings to complete before class

- Tuesday
 - Chapter 3: Markup (pp. 110-127, XHTML – Introduction, Text Elements, Lists, Tables, and Links) from Web Design
- Thursday
 - Chapter 3: Markup (pp. 127-148, XHTML – Forms, The Document Head, Frames, and Key Points) from Web Design

Week 5: 9/15 & 9/17 – Stylesheets

Readings to complete before class

- Tuesday
 - Chapter 4: Stylesheets (pp. 151-162, Rules in CSS) from Web Design
- Thursday
 - Chapter 4: Stylesheets (pp. 162-176, Typography) from Web Design

Groups must be formed by 9/17

Week 6: 9/22 & 9/24 – Stylesheets, Continued

Readings to complete before class

- Tuesday
 - Chapter 4: Stylesheets (pp. 176-191, Layout) from Web Design
- Thursday
 - Chapter 4: Stylesheets (pp. 191-219, Positioning, Special Cases, Advanced Features of CSS, and Key Points) from Web Design

Week 7: 9/29 & 10/1 – Web Page Design

Readings to complete before class

- Tuesday
 - Chapter 10: Web Page Design (pp. 547-563, Visual Communication) from Web Design
- Thursday
 - Chapter 10: Web Page Design (pp. 563-586, Layout) from Web Design
- Recommended: Chapter 7: Typography (pp. 107-124) from Cascading Style Sheets: Separating Content from Presentation.

Week 8: 10/6 & 10/8 – Web Page Design, Continued

Readings to complete before class

- Tuesday
 - Chapter 10: Web Page Design (pp. 586-592, Colour and Tone) from Web Design
- Thursday
 - Chapter 10: Web Page Design (pp. 592-607, Typography, and Key Points) from Web Design
- Recommended: Chapter 7: Typography (pp. 124-135) from Cascading Style Sheets: Separating Content from Presentation.

Week 9: 10/13 & 10/15 – Web Graphics & Fall Break

Readings to complete before class

- Tuesday
 - Chapter 5: Web Graphics (pp. 223-254, Display and Storage of Images, Colour, and Bitmapped Images) from Web Design
- Recommended: Chapter 7: Typography (pp. 135-161) from Cascading Style Sheets: Separating Content from Presentation.

10/13: MIDTERM DUE

Week 10: 10/20 & 10/22 – Web Graphics & Time-Based Media

Readings to complete before class

- Tuesday
 - Chapter 5: Web Graphics (pp. 254-280, Vector Graphics, XHTML Markup for Images, & Key Points) from Web Design
- Thursday
 - Chapter 6: Time-Based Media (pp. 283-307, Time-Based Media and Web Pages, and Animation) from Web Design

Week 11: 10/27 & 10/29 – Time-Based Media & DOM Scripting

- Tuesday
 - Chapter 6: Time-Based Media (pp. 307-335, Video, Sound, and Key Points) from Web Design
- Thursday
 - Chapter 7: DOM Scripting (pp. 339-357, Fundamentals and The DOM) from Web Design

Week 12: 11/3 & 11/5 – DOM Scripting

Readings to complete before class

- Tuesday
 - Chapter 7: DOM Scripting (pp. 357-385, JavaScript and Dynamic Pages) from Web Design
- Thursday
 - Chapter 7: DOM Scripting (pp. 386-412, Applications of DOM Scripting) from Web Design

Week 13: 11/10 & 11/12 – DOM Scripting & Web Applications

Readings to complete before class

- Tuesday
 - Chapter 7: DOM Scripting (pp. 412-432, Embedded Applications and Key Points) from Web Design
- Thursday
 - Chapter 8: Web Applications (pp. 435-461, Server-Side Technologies, Ready-made Applications, and Databases) from Web Design

Week 14: 11/17 & 11/19 – Web Applications & Accessibility

Readings to complete before class

- Tuesday
 - Chapter 8: Web Applications (pp. 462-499, Dynamically Generated Pages, and Key Points) from Web Design
- Tuesday
 - Chapter 9: Web Accessibility (pp. 503-519, Problems with Access, Assistive Technology, and Making Sites More Accessible) from Web Design

Additional resources

- Tools and resources for verifying accessibility:
 - The WAVE accessibility validation tool is available at <http://www.w3.org/WAI/eval/preliminary.html>
<http://wave.webaim.org/index.jsp>.
 - The Bobby accessibility validation tool is available at <http://www.w3.org/WAI/eval/preliminary.html>
<http://webxact.watchfire.com/>.
 - Thatcher, Jim. (n.d.). Testing for Web Accessibility. Excerpted from Chapter 13 of Thatcher's book Web Accessibility: Web Standards and Regulatory Compliance, by Jim Thatcher, et al., published by Friends of Ed, July, 2006. Excerpt available at: <http://www.w3.org/WAI/eval/preliminary.html>
<http://www.jimthatcher.com/testing.htm>.
 - W3C. (n.d.). Evaluating Web Sites for Accessibility: Overview. Available at: <http://www.w3.org/WAI/eval/preliminary.html>
<http://www.w3.org/WAI/eval/>.
- The University of Wisconsin's "Web Accessibility 101" course site, located at: <http://www.doit.wisc.edu/accessibility/online-course/index.htm>.

Week 15: 11/24 & 11/26 - Project Presentations & Thanksgiving

- Tuesday
 - First group of project presentations

11/24: Term project due

Week 16: 12/1 – Project Presentations

- Tuesday
 - Second group of project presentations

12/8: FINAL EXAM DUE

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